

## REMARKS

Applicants have responded to all outstanding objections/rejections as discussed hereinbelow. Claims 2-4, 41, 33 and 51 were cancelled, claims 1, 42 and 43 have been amended, and claims 25-26, 29, 37-38, 45-50 and 52-57 have been withdrawn from consideration. The elements of claims 3 and 4 have been incorporated into claim 1.

Applicants preserve the right to prosecute all cancelled claims and deleted subject matter in continuing patent applications.

### Rejections under 35 U.S.C. § 112, second paragraph

(1) The Office rejected claims 1-24, 27, 28, 30-36, 39-44 and 51 under 35 U.S.C. § 112, second paragraph, alleging that the term prodrugs renders this claim indefinite. For the sole purposes of expediting prosecution, Applicants have deleted the term prodrug from the claims. Accordingly, this rejection has been rendered moot by this amendment.

(2) The Office rejected claims 44 and 51 under 35 U.S.C. § 112, second paragraph. For the sole purposes of expediting prosecution, Applicants have cancelled claims 44 and 51. Accordingly, this rejection has been rendered moot by this amendment.

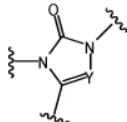
### Rejections under 35 U.S.C. § 112, first paragraph

The Office has rejected claims 1-24, 27, 28, 30-36, 39-44 and 51 under 35 U.S.C. § 112, first paragraph, alleging that the term hydrate is not enabled. For the sole purpose of expediting prosecution, Applicants have deleted the terms hydrate from the claims. Accordingly, this rejection has been rendered moot by this amendment.

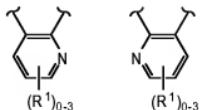
### Rejections under 35 U.S.C. § 102(b)

The Office has rejected claims 1-10 and 43 U.S.C. § 102(b), alleging that these claims are anticipated by each of U.S. Patent Nos. 5,811,426, 5,728,700, 5,650,411, 5,637,592, and 5,571,811. Applicants respectfully traverse.

In regard to each of the above cited patents, each one recites a compound that requires the following moiety:



The term Ar in claim 1 is now defined as being selected from the following formulae:



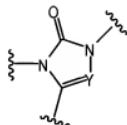
wherein R<sup>1</sup> does not include oxo. Each of the cited references (5,811,426, 5,728,700, 5,650,411, 5,637,592, and 5,571,811) does not disclose any of the above moieties as required by amended claim 1. Furthermore, each of U.S. Patent Nos. 5,811,426, 5,728,700, 5,650,411, 5,637,592, and 5,571,811 would require an oxo group attached to a 5 membered heterocyclic ring, and this is not disclosed within the definition of Ar of amended claim 1 or anywhere else within the amended set of claims. Since all the required elements of the pending claims are not disclosed in 5,811,426, 5,728,700, 5,650,411, 5,637,592, or 5,571,811, the pending claims are novel in view of each of these cited references. Accordingly, Applicants respectfully request reconsideration and removal of these rejections.

Rejections under 35 U.S.C. § 103(a)

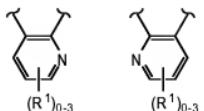
(1) Rejections under 35 U.S.C. § 103(a)

The Office has rejected claims 1-10 and 43 U.S.C. § 103(a), alleging that these claims are unpatentable over 5,811,426, 5,728,700, 5,650,411, 5,637,592, and 5,571,811. Applicants respectfully traverse.

In regard to each of the above cited patents, each one recites a compound that requires the following moiety:



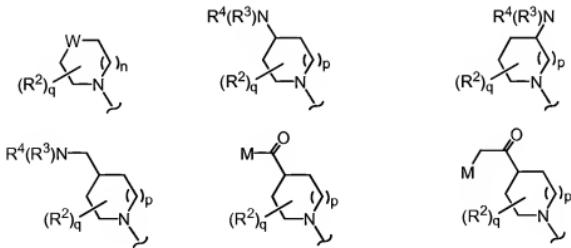
As stated above, the term Ar in claim 1 has been amended to be defined as being selected from the following formulae



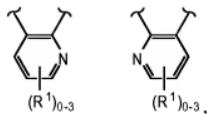
wherein R<sup>1</sup> does not include oxo. In contrast, each of the cited references (5,811,426, 5,728,700, 5,650,411, 5,637,592, and 5,571,811) would require an oxo group attached to a 5 membered heterocyclic ring, as shown above, which is not disclosed within the definition of Ar of amended claim 1 or anywhere else within the amended set of claims. None of these cited references give any reason to one skilled in the art to make the necessary changes to the compounds disclosed within these references to arrive at Applicants' claimed compounds. Furthermore, one skilled in the art would not have any reasonable expectation of success by making these required changes in any of these cited references. to arrive at the compounds of the instant claims because these changes would lead to compounds with properties that one skilled in the art would not be able to predict prior to making these compounds. Since the cited references do not provide any reason to make the necessary modifications to arrive at Applicants' claimed compounds, and since these cited references do not provide any reasonable expectation of success for making these necessary modifications to arrive at Applicants' claimed compounds, Applicants' pending claims are patentable over each of 5,811,426, 5,728,700, 5,650,411, 5,637,592, and 5,571,811. Accordingly, Applicants respectfully request reconsideration and removal of these rejections.

The Office has rejected claims 1-24, 27, 30-36, 39-44 and 51 under 35 U.S.C. § 102(b), alleging that these claims are unpatentable over Liz et al., U.S. 5,63,268. Applicants respectfully traverse.

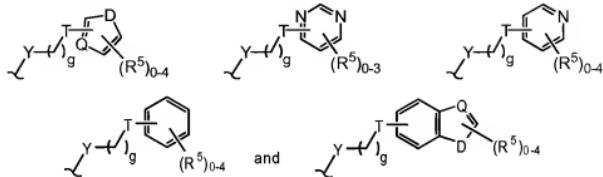
As stated above, the claim 1 requires X, which is selected from the following six formulae:



wherein X is attached directly to Ar, which selected from:



wherein Ar is attached to Y-L-Z, which is selected from

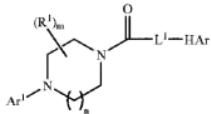


In contrast, Linz et al. do not disclose the possibility of a heterocycloalkyl attached directly to pyridinyl moiety, which is then attached through a linker to a cyclic aromatic moiety as defined in -Y-L-Z. Furthermore, Linz et al. require that X<sup>1</sup> be attached to X<sup>2</sup>, which are both selected from an aromatic group selected from phenylene, pyridinylene, pyrimidinylene and pyrazinylene, which is not possible in the instant claims. Linz et al. do not give any reason to make the necessary changes to the compounds disclosed within Litz et al. to arrive at Applicants' claimed compounds. One skilled in the art would not have any reasonable expectation of success by making these required changes in Litz et al. to arrive at the compounds of the instant claims because these changes would lead to compounds with properties that one skilled in the art would not be able to predict prior to making these compounds.

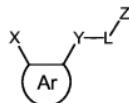
For all of the reasons stated above, Applicants' pending claims are patentable over Litz et al. Accordingly, Applicants respectfully request reconsideration and removal of these rejections.

The Office has rejected claims 1-24, 27, 30-36, 39-44 and 51 under 35 U.S.C. § 103(a), alleging that these claims are unpatentable over Pennell et al., U.S. 7,449,576. Applicants respectfully traverse.

Pennell et al. disclose the following compounds:

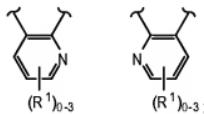


which have a central piperidine moiety having two aryl groups attached at both ends of the piperidine moiety. In contrast, claim 1 of Applicants' claims relate to the following compound:

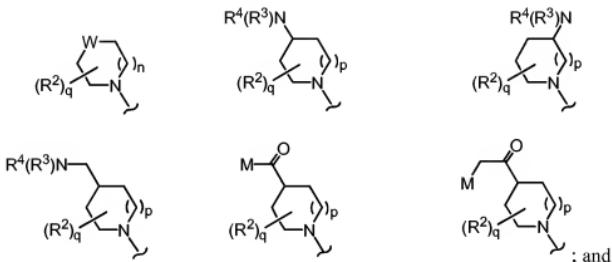


which has a central Ar group having an X group attached on one side and a -Y-L-Z group attached at the other side of the central Ar group. The Ar group, the -Y-L-Z group and X group are each defined in claim 1 of Applicants' claims as follows:

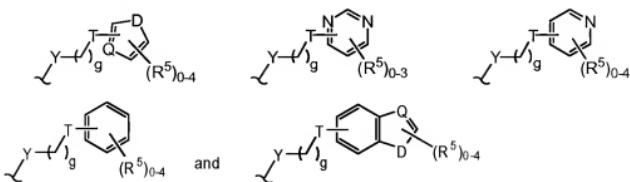
Ar in claim 1 is now defined as being selected from the following formulae



X is selected from the following six formulae:



-Y-L-Z is selected from



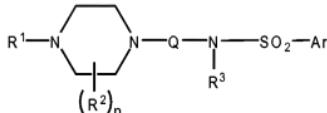
The instant claims require a heterocycloalkyl ring X be bonded directly to Ar ( a pyridinyl group) and Ar is attached to -Y-L-Z, Pennell et al. does not disclose a piperidinyl group

bonded directly to a pyridinyl ring, which is attached to an aromatic ring as defined within -Y-L-Z. Nor does Pennell et al. give any reason to make the necessary changes to the compounds disclosed within Pennell et al. to arrive at Applicants' claimed compounds. In fact, all of the specific compounds disclosed in Pennell et al. do not have any ring structure attached to the phenyl ring which is directly bonded to the piperidinyl ring, which would be required within the definition of -L-Y-Z of the instant claims. One skilled in the art would not have any reasonable expectation of success by making these required changes in Pennell et al. to arrive at the compounds of the instant claims because these changes would lead to compounds with properties that one skilled in the art would not be able to predict prior to making these compounds.

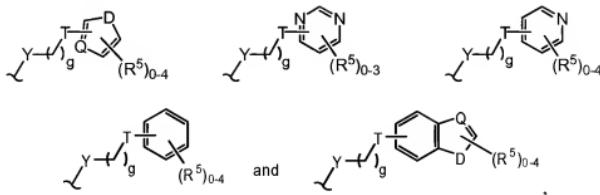
For all of the reasons stated above, Applicants' pending claims are patentable over Pennell et al. Accordingly, Applicants respectfully request reconsideration and removal of these rejections.

The Office has rejected claims 1-24, 27, 28, 30-36, 39-44 and 51 under 35 U.S.C. § 103(a), alleging that these claims are unpatentable over Braje et al., U.S. 7,320,979. Applicants respectfully traverse.

Braje et al. disclose compound that require the following compounds:



wherein Q can be a pyridinyl group. In contrast, claim 1 of Applicants' claims requires that the  $-\text{N}(\text{R}^3)-\text{SO}_2-\text{Ar}$  portion of the compounds in Braje et al. be  $-\text{Y}-\text{L}-\text{Z}$  as defined in instant claim 1 as selected from



wherein Y is selected from  $-\text{CH}_2-$ ,  $-\text{O}-$ ,  $-\text{N}(\text{R}^3)-$ , and absent, g is zero to two; T is selected from absent,  $-\text{N}(\text{R}^3)-$ ,  $-\text{S}-$  and  $-\text{O}-$ ; and each methylene between Y and T is optionally substituted;

provided that when both Y and T are heteroatoms then g must be two. The instant claims would require the removal of the -SO<sub>2</sub>- linker directly attached in Ar as required in Braje et al., and the replacement of it with -N(R<sup>3</sup>)-, -S- or -O-. Furthermore, the instant claims would require there be two methylene groups in between Y and T since Braje et al. would require both Y and T of the instant claims to be both heteroatoms. Thus Braje et al. would need to have an ethylene linker between -N(R<sub>3</sub>)- and -SO<sub>2</sub>- as required in the instant claims. These are two chemical changes the instant claims would require Braje et al. to make. Furthermore, Braje et al. do not provide any reason to modify the compounds so to make the necessary changes to arrive at the compounds of the instant claims. One skilled in the art would not have any reasonable expectation of success by making these required changes in Braje et al. to arrive at the compounds of the instant claims because these changes would lead to compounds with properties that one skilled in the art would not be able to predict prior to making these compounds.

For all of the reasons stated above, Applicants' pending claims are patentable over Braje et al. Accordingly, Applicants respectfully request reconsideration and removal of these rejections.

If there are any questions or comments regarding this application, the Examiner is encouraged to contact the undersigned in order to expedite prosecution.

Respectfully submitted,

Date: January 22, 2010

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